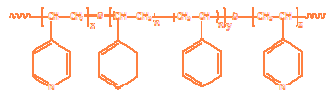


Sample Name: Poly(4-vinyl pyridine-b-styrene-b-4-vinyl pyridine)

Sample #: P19216-4VPS4VP

Structure:



Composition:

Mn x 10 ³	PDI
4VP-b-PS-b-4VP	
5.0-b-70.5-b-5.0	1.11
T _g for PS block: 102°C	T _g for 4VP block: 135°C

Synthesis Procedure:

Poly(4-vinyl pyridine-b-styrene-b-4-vinyl pyridine) is prepared by living anionic polymerization using a bifunctional initiator with sequence addition of styrene followed by 4-vinylpyridine (4VP).

Characterization:

The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

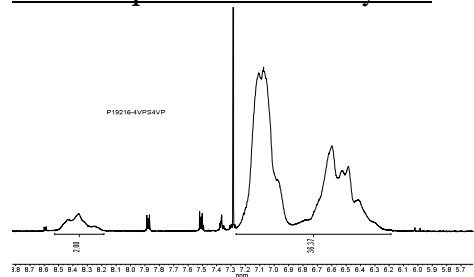
Thermal analysis:

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

Poly(4-vinyl pyridine-styrene-b-4-vinyl pyridine) is soluble in DMF, CHCl₃. The polymer can also be solubilized in THF depending on its chemical composition. The polymer readily precipitates from hexanes and diethyl ether.

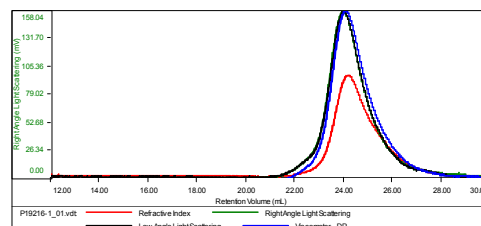
HNMR Spectrum of the Polymer:



SEC of the polymer:

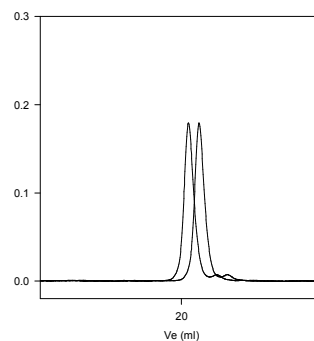
Sample ID: P19216-S

Concentration (mg/mL)	2.4279
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-April13-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19216-1_01.vdt	70,528	78,515	79,345	1.113	0.9717

P19216-4VPS4VP



SEC profile in DMF at 30 °C.
Polystyrene, M_n=70,500, M_w: 78,800 PI=1.11
Block Copolymer 4VP (5,000)-PS(70,500)-b-P4VP(5,000), PI=1.10
(composition by titration and by H NMR)

DSC thermograms for the sample:

